

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

PARKERVISION, INC.,

Plaintiff,

v.

MEDIATEK INC. and  
 MEDIATEK USA INC.,

Defendants.

Case No. 6:22-cv-01163-ADA

**JURY TRIAL DEMANDED**

**REPLY CLAIM CONSTRUCTION BRIEF  
BY DEFENDANTS MEDIATEK INC. AND MEDIATEK USA INC.**

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## I. INTRODUCTION

ParkerVision's three-pronged approach to *Markman* in this case is inappropriate.

First, ParkerVision's primary argument is that because some claim terms on the asserted patents have been construed by this Court, it is improper for MediaTek to propose *any* terms for construction in this case. MediaTek obviously is aware of this Court's previous *Markman* rulings, and MediaTek understands it needs to address those prior rulings. But MediaTek has never provided *its* claim construction evidence and arguments. It is entitled to be fully heard on its proposed constructions, especially on terms never before proposed for construction, and especially on terms where there is never-considered intrinsic evidence or appellate activity (*e.g.*, "storage [module / device / element]").

Second, ParkerVision is simultaneously speaking out of both sides of its mouth. On the one hand it tells the Court that it needs to simply adopt, without analysis, its previous constructions. But on the other hand, when it suits its litigation needs, ParkerVision says the Court got it wrong, and should reverse course on a previous construction. That's the case with the term "cable modem" term. Notwithstanding ParkerVision's flip-flopping, MediaTek provided and provides its arguments and evidence why the Court in this instance got it right.

Finally, ParkerVision's responsive brief relies on improper evidence. ParkerVision's brief was due on November 21<sup>st</sup>, the Tuesday before Thanksgiving. ParkerVision filed its brief that day. (Dkt. 49.) The next day, without any previous discussion with MediaTek, ParkerVision filed a "substitute" brief which did not correct anything in its initial brief. Rather, ParkerVision attached a new declaration containing new evidence from its expert Dr. Ricketts. (Dkt. 50, 50-9). This expert evidence ParkerVision tried to sneak in is undisputedly untimely. It was only after it filed its untimely expert evidence, on the Friday after Thanksgiving, that ParkerVision said it was going to seek leave to "substitute" in its already filed untimely new

evidence. Even then, ParkerVision improperly waited almost a week to actually file its motion (Dkt. 51). This belief that this Court’s rules and practices do not apply to ParkerVision is just the latest example of ParkerVision’s gamesmanship in its three litigations where ParkerVision is trying to strong-arm MediaTek into settlement by its improper conduct.

## II. TERMS PREVIOUSLY CONSTRUED

### A. ParkerVision’s arguments regarding “storage [module / device / element]” are both unpersuasive and inconsistent.

The parties’ dispute for this term centers on whether “of an energy transfer system” is appropriate to include in the construction of “storage [module / device / element].” In its opening brief, MediaTek set forth straightforward reasons why “of an energy transfer system” is inappropriate, and noted that these reasons were adopted by the PTAB in the Final Written Decision in IPR2021-00985, a decision currently being reviewed by the Federal Circuit. Those reasons were: (1) ParkerVision sought to construe “storage module” according to *MediaTek’s* proposed construction in IPR2014-00948; (2) in doing so, ParkerVision contended that “[t]he incorporated ’551 specification explicitly defines a storage module” as a “system[] that store[s] non-negligible amounts of energy from an input EM signal”; (3) the PTAB agreed that the ’551 patent so expressly defined “storage module”; and (4) the PTAB issued its construction notwithstanding Judge Gilliland’s and Special Master Yi’s construction which included “of an energy transfer system,” in part because ParkerVision had no “even remotely” colorable explanation for why it should be permitted to contravene its repeated arguments in IPR2014-00948 about the express definition of “storage module.” Dkt. 45 at 6–7 (citations omitted).

In response, ParkerVision says MediaTek cannot raise the PTAB’s construction and rationale, even though it is *intrinsic evidence* for this claim term. *E.g.*, Dkt. 50 at 2 (“Now with all arguments exhausted, MediaTek stretches to find something new to say.”); *id.* (“MediaTek’s

attempt to recast the FWD in the '835 patent IPR as different than what Judge Gilliland already considered is nonsense."); *Synders Heart Valve LLC v. St. Jude Med.*, No. CV 18-2030, 2020 WL 1445835, at \*3 (D. Minn. Mar. 25, 2020) (“Moreover, final written decisions from the PTAB are considered non-binding, intrinsic evidence similar to evidence related to the patent’s prosecution history.” (citations omitted)). ParkerVision is obviously wrong that *intrinsic evidence* cannot be considered. ParkerVision, moreover, does not offer any persuasive reason to ignore its previous statements and the PTAB’s considered reasoning.

ParkerVision does not address why it previously and repeatedly contended that “storage module” was expressly defined by the incorporated ’551 patent as simply “an apparatus that stores non-negligible amounts of energy from the carrier signal.” Ex. 14 at 21–23. ParkerVision undisputedly proposed the same claim construction MediaTek now proposes. Instead, ParkerVision supports its about-face urging a schizophrenic argument—that the use of “refers to” in the ’518 patent is somehow both definitional and *not* definitional. Dkt. 50 at 6, 7–8.

ParkerVision first contends the ’518 patent defines “modules” as being “of an energy transfer system” when it states: “Storage modules and storage capacitances, on the other hand, refer to systems that store non-negligible amount of energy from an input EM signal.” In ParkerVision’s words: “[S]torage modules ‘refer to systems’ (i.e., identify systems) that store non-negligible amounts of energy. In other words … if a ‘storage’ module is being used, the system is an energy transfer system.” Dkt. 50 at 6 (emphasis in original). But ParkerVision then goes on to contend that the same disclosure is not somehow not definitional as to what it expressly says: “The use of the phrase ‘refer to *systems*’ provides a clear indication that the last sentence is not intended to define a ‘storage’ module[.]” *Id.*; *see also id.* at 8 (refers to “is comparative, not definitional.”). ParkerVision’s position is thus based on contradicting its past

***unambiguous, successful*** argument in support of the construction MediaTek now seeks, while also based on an internally inconsistent position that “refers to” is both definitional and not definitional. The Court should reject such maneuvering by ParkerVision.

ParkerVision also points to figures from the ’518 patent (68G and 82B), contending they show that a “storage module” is somehow more than just a capacitor (and must be used in an “energy transfer system”). But the patent discloses “a storage module illustrated as a storage capacitance 8208,” ’518 patent at Fig. 82B, 66:14–15, and it describes the other components of an “energy transfer system” separately, such as “low impedance load” 8218. Moreover, the patent never says a “storage module” must be used in “energy transfer systems.”

ParkerVision also makes much of the word “systems” in “Storage modules … refer to systems that store non-negligible amounts of energy from an input EM signal.” ’518 patent at 66:21–23. But the use of “systems” in this instance does not refer to “energy transfer system.” “Energy transfer system” is used separately in that same paragraph as a system “for down-converting an input EM signal.” ’518 patent at 66:11–12 (“FIG. 82A illustrates an exemplary energy transfer system 8202 for down-converting an input EM signal 8204.”).

Lastly, ParkerVision argues its prior statements in IPR2014-00948 are irrelevant. Dkt. 50 at 9 (arguing construction was under BRI standard). MediaTek addressed this argument in its opening brief, Dkt. 45 at 7–8 (citing *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361–1362 (Fed. Cir. 2017)), and ParkerVision’s response notably omits mention of *Aylus*. Instead, ParkerVision raises a non-sequitur—that “ParkerVision’s [Patent Owner Preliminary Response] included the same passage quoted above in its entirety (’518 patent, 66:11–23), not merely the last sentence in red,” and that the *Philips* standard “requires a review of the entire passage *as a whole*[.]” Dkt. 50 at 9 (emphasis in original) (no citation to authority). But not only did the

PTAB consider more than just the “last sentence in red,” *see* Ex. 12 at 17, ParkerVision undisputedly and unequivocally argued in IPR2014-00948 that the “full passage” “explicit[ly] defin[es]” a storage module as “an apparatus that stores non-negligible amounts of energy from the carrier signal,” Ex. 14 at 21–22. Accordingly, ParkerVision’s attorney argument cannot overcome its previous unambiguous statements made during the ’551 patent IPR. *Aylus*, 856 F.3d at 1361–1362 (statements made during IPR proceedings can constitute prosecution disclaimer); *Virginia Innovation Sci., Inc. v. Samsung Elecs. Co., Ltd.*, 614 F. App’x 503, 511 (Fed. Cir. 2015) (“[A]ttorney arguments are not relevant intrinsic or extrinsic evidence.”).

**B. ParkerVision’s arguments do not support its erroneous construction of “switch”**

MediaTek contends “as dictated by an independent control input” should not be included in the construction of switch. As MediaTek explained in its opening brief, the term “switch” (1) has an ordinary meaning that does not include “as dictated by an independent control input,” (2) ParkerVision’s construction fails to inform a fact finder as to what and how the control input is independent, and (3) the ’706, ’835, ’518 patents include examples where a switch’s control input is **not** physically or logically independent from at least the output of a switch. Dkt. 45 at 8–10. ParkerVision’s construction is therefore contrary to the ordinary meaning of switch, contrary to the patents’ written descriptions, and would be unhelpful to a jury. *Id.* at 10 (citing *ActiveVideo Networks, Inc. v. Verizon Commc’ns, Inc.*, 694 F.3d 1312, 1326 (Fed. Cir. 2012)).

In response, ParkerVision fails to demonstrate how its construction is helpful to the fact finder or how its proposed construction clarifies the ordinary meaning of switch. Importantly, ParkerVision does not even attempt to rebut Dr. Hashemi’s testimony.

ParkerVision primarily points to annotated figures 28A, 28C, and 28D of the ’518 patent, contending the red arrows it added show that the “control input” is “independent.” ParkerVision,

however, never explains what it means by “independent.” At one point, ParkerVision appears to contend that these figures show the control input “is *independent* from the input (blue arrow).” Dkt. 50 at 12 (emphasis in original). But it does not dispute, at least with respect to figure 28D, that the control input is not physically independent of the output node—and ParkerVision’s proposed construction does not say “as dictated by a control input that is independent of the input signal.” Moreover, the ’518 patent mentions that the control signal may be equivalent to the input signal or a harmonic or subharmonic thereof, which would create a form of dependence between the input and the control input. *E.g.*, ’518 patent at 83:19–31. ParkerVision’s independence contention is plain wrong.

ParkerVision’s other arguments also lack merit. First, ParkerVision argues that “MediaTek faults this Court for failing to consider Figures 28C and 69 of the ’518 patent.” Not so. MediaTek merely noted that Special Master Yi’s opinion was the only opinion to provide a rationale for including “as dictated by an independent control input” and that his opinion “did not expressly consider Figures 28C or 69 ....” Dkt. 45 at 10. ParkerVision does not dispute this; it merely casts aspersions saying it cited to Figure 28C (but not Figure 69) in the *Intel 108* case. Dkt. 50 at 10. ParkerVision also says that MediaTek’s contention that “ParkerVision’s construction … does not line up with its specific arguments before Judge Byron” is “just a bare assertion.” *Id.* But Judge Bryon wrote: “ParkerVision submits that the control signal is independent from the input or the output of the switch,” Ex. 15 at 31, and not only is ParkerVision’s construction not so limited, but ParkerVision now concedes that the asserted patents contain examples where the input is not independent of the output.

**C. The claim term “harmonic[s]” does not encompass the fundamental frequency of an input signal.**

MediaTek rests on the briefing of other defendants as to this term. *See* Dkt. 45 at 11–12

(citing Ex. 16 at 32).

**D. ParkerVision fails to justify its request for dual constructions of “under-sampling”**

ParkerVision offers no reason to adopt dual constructions for “under sampling,” when the parties agree on “sampling at less than or equal to twice the frequency of the input signal.” ParkerVision also does not dispute that the ’706 patent consistently describes “aliasing” with respect to the “input signal.” Dkt. 45 at 12 (citing ’706 patent at 29:4–12). ParkerVision’s alternative construction, however, recites “sampling at an aliasing rate” but does not require “sampling at an aliasing rate *of said input signal.*” It thus creates unnecessary ambiguity.

ParkerVision’s response is not to show a need for dual constructions, but rather to make unsupported and vague allegations that MediaTek’s construction “will afford it the best opportunity to support its defenses.” Dkt. 50 at 14. Nothing in the record supports this allegation. ParkerVision’s request for dual constructions should be rejected.

**E. ParkerVision fails to show “cable modem” is limiting.**

While ParkerVision attacks MediaTek several times for raising constructions previously rejected by this Court, Judge Gilliland, or Special Master Yi, ParkerVision has no issue doing so when it suits ParkerVision. This is the case with the term “cable modem.” ParkerVision, however, fails to carry its burden to show that “cable modem” is limiting with respect to claim 1, including for the reasons previously set forth by Judge Gilliland, and the PTAB in IPR2021-00985. Dkt. 45 at 13–14; *Am. Med. Sys., Inc. v. Biolitec, Inc.*, 618 F.3d 1354, 1358 (Fed. Cir. 2010) (preamble is presumed to be non-limiting).

ParkerVision does not meet its burden that “cable modem” in claim 1 (previously “system” during the pendency of the ’835 patent’s prosecution, and changed to “cable modem” for no apparent reason—still “system” in claim 5) is “necessary to give life, meaning, and

vitality” to claim 1. *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (citation omitted). Instead, as Judge Gilliland and the PTAB explained, claim 1 recites a structurally complete invention (a system for down-converting an electromagnetic signal) and the use of “cable modem” only provides a context or intended use. Ex. 10 at 11, 23.

ParkerVision cites *Poly-Am., L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1310 (Fed. Cir. 2004) and *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1358–59 (Fed. Cir. 2012) (citing *Poly-America*), but these cases do not dictate the result here. For example, in *Poly-Am.*, the patent at issue (U.S. Patent No. 5,763,047) had claims with a preamble reciting a “blown-firm textured liner” and a claim-body reciting layers making up the liner. In contrast, claim 1 of the ’835 patent recites structurally-complete down-conversion circuitry, and the preamble only provides an intended use. Ex. 10 at 23 (“[I]f ‘cable modem’ was replaced with a generic term like ‘device’ or ‘system,’ Claim 1 would still define a structurally complete invention that down-converts an electromagnetic signal by using an oscillator, a phase shifter, a first frequency down-conversion module, and a second frequency down-conversion module.”).

*TriQuint Semiconductor, Inc. v. Avago Techs. Ltd.*, No. CV-09-01531, 2011 WL 98948 (D. Ariz. Jan. 12, 2011) is instructive. There, the district court distinguished *Poly-America* and held that “bulk acoustic wave filter” in the preamble was not limiting: “The preamble does not recite an essential structure, because the claims are written in terms of the structure and characteristics of bulk acoustic wave resonators, and not bulk acoustic wave filters.” *Id.* at \*29. The same is true here—the body of the claim is written in terms of structure for down-conversion circuitry and not “cable modems.” Sensing this weakness, ParkerVision asserts that “the claims are directed to a configuration of a receiver that e.g., [sic] can operate along with a transmitter so that there is no interference between the receiver and transmitter.” This statement should be

given no weight, however, as it is mere attorney argument, lacking intrinsic and extrinsic support. Indeed, the '835 patent's written description mentions "interference" only once, in a different context. Accordingly, ParkerVision's attorney argument is immaterial. *See Virginia Innovation Sci.*, 614 F. App'x at 511.

ParkerVision also points to dependent claims 16 and 17, which recite "the cable modem." But the claim at issue is claim 1. ParkerVision offers no authority that the mere mention of a preamble term in a dependent claim can convert that term into a limitation for an independent claim. *See* Ex. 10 at 24 ("[T]he Court disagrees with Plaintiff that the preamble of Claim 1 provides antecedent basis for 'the cable modem' which appears in the preambles of dependent Claims 16 and 17. ... Plaintiff does not cite any authority where a court found that the recitation of a claim term in the body of a dependent claim require[ed] limiting that claim term in the preamble of the independent claim. At most, in such a situation only the preamble of the dependent claim would be so limited." (emphasis in original)).

### **III. ADDITIONAL TERMS TO BE CONSTRUED**

#### **A. ParkerVision offers no legitimate opposition to MediaTek's proposed construction of "delaying said down-converted input samples."**

The '706 patent consistently and repeatedly equates "delaying" with "holding" down-converted input samples for a known amount of time. Dkt. 45 at 15 (citations omitted). ParkerVision makes no attempt to dispute this. ParkerVision instead says MediaTek "cherry-pick[ed] portions of the specification that support its construction, while purposefully omitting others." Dkt. 50 at 16. Yet ParkerVision's sole example in this regard is a brief mention of "analog delay lines," something that MediaTek already addressed. Dkt. 45 at 15.

Further, ParkerVision strains to show how this sole example undermines the patent's consistent and repeated reference to "delaying" as "holding." ParkerVision notes that the patent

provides “an analog delay line 3404 is constructed using a combination of capacitors, inductors, and/or resistors,” and thus contends that, according to the patent, “a delay line can be configured with just inductors and resistors but *without* any capacitors.” Dkt. 50 at 17. ParkerVision then relies on the untimely, “substitute” declaration of Dr. Ricketts to argue that because “inductors and resistors” cannot “hold” samples, an “analog delay line” made of only inductors and resistors somehow means that the ’706 patent does not consistently and repeatedly equate “delay” with “hold.” But not only is Dr. Ricketts’ bare assertion wrong—inductors can store electrical charge, *e.g.*, Ex. 20 at 84:60–61 (ParkerVision ’555 patent)—the ’706 patent explicitly equates “delay” and “hold” nearly a dozen times. Dkt. 45 at 15.

Outside of this, ParkerVision does not dispute that, if the ’706 patent consistently and repeatedly equates “delay” with “hold,” then MediaTek’s construction is proper under *Wisconsin Alumni Rsch. Found. v. Apple Inc.*, 905 F.3d 1341, 1351 (Fed. Cir. 2018) (citations omitted).<sup>1</sup>

**B. ParkerVision offers attorney argument in seeking a plain-and-ordinary-meaning construction of “in an integrated manner.”**

ParkerVision offers attorney argument to oppose MediaTek’s proposed construction of “in an integrated manner.” ParkerVision contends that “i.e.,” does not define “integrated” as “single, unified,” because although ParkerVision does not dispute that “i.e.,” is used definitionally, ParkerVision contends that its use here only defines “single, unified” as “integrated,” and not the other way around. ParkerVision’s only support for its position is an irrelevant, attorney argument hypothetical (“a car (*i.e.*, a vehicle”), rather than intrinsic evidence. Dkt. 50 at 17–18. But, as MediaTek explained in its opening brief, the ’706 patent

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<sup>1</sup> ParkerVision also contends MediaTek’s proposed construction is improper because it refers to “said down-converted samples” rather than “said down-converted input samples.” Dkt. 50 at 16. This alleged criticism is without merit as MediaTek construction recites “said” and the only down-converted samples recited by claim 8 of the ’706 patent are “down-converted input samples.”

discloses “integrated” to mean “single, unified” in several places, not just when it uses “i.e.” Dkt. 45 at 16 (citing ’706 patent at 10:31–33 (“single unified (i.e., integrated)”), 14:40–43 (“single, unified (integrated”), and 22:24–27 (“single, unified (integrated”).

#### **IV. INDEFINITE TERMS**

##### **A. “wherein step (2) is at least partially integral with step (1)”**

ParkerVision does not dispute that ordinary meaning of “integral” is “formed as a part unit with another part,” and thus as a matter of logic “partially integral” does not make sense. Instead, ParkerVision’s sole argument is that “‘partially integral’ in [the] context [of the ’706 patent’s specification] means that the undersampling and delaying operations are in part combined and performed ‘concurrently.’” Dkt. 50 at 19. But the portion of the specification to which ParkerVision cites uses “integrated,” not “partially integral” (or even partially integrated). *Id.* (citing ’706 patent at 13:53–58). ParkerVision’s argument is thus irrelevant.

##### **B. “pulse widths that are established to improve energy transfer from said input signal to said down-converted image”**

ParkerVision does not dispute that, as claimed in the ’706 patent, an improvement in energy transfer can result from something other than the supposed “impedance matching” caused by use of “non-negligible apertures.” Dkt. 45 at 19-20 (citing claims 18 and 92). ParkerVision also does not dispute that the ’706 patent fails to provide guidance about how to measure a supposed improvement in energy transfer other than from “impedance matching.” *Id.* at 20. Nor does ParkerVision contest that an improvement in energy transfer other than from “impedance matching” would be inconsistent with the principle of impedance matching itself. *Id.*

Instead, ParkerVision attempts to argue that the disputed phrase “simply means that pulses having *non-negligible* apertures are being used.” Dkt. 50 at 19–21 (emphasis in original); Dkt. 50-7 at 17–19. But this is incorrect for at least three reasons. First, several claims of the

'706 patent recite the use of “non-negligible apertures,” including specifically to “increase energy transferred.” This shows that the disputed phrase—which does not recite “non-negligible apertures”—means something different than “simply … pulses having non-negligible apertures … used.” ’706 patent at claims 88, 91, 96, 109, 111; *Gonza, LLC v. Mission Competition Fitness Equip., LLC*, No. W-21-CV-00771-ADA, 2022 WL 1609437, at \*5 (W.D. Tex. May 20, 2022) (citations omitted) (“[W]hen a patent uses two different terms in the claims, the general presumption is that the two terms have different meanings, and it is improper to substitute one term for the other.”).

Second, even under ParkerVision’s view, one of skill in the art still lacks guidance as to how to determine (i) whether non-negligible apertures tending away from zero time in duration are being used (*see infra* Section IV.D) and (ii) whether a supposed “improvement” in energy transfer has occurred with the use of non-negligible apertures, including where, for example, non-negligible apertures are already in use before attempting to “improve energy transfer.” *See JobDiva, Inc. v. Monster Worldwide, Inc.*, No. 13-cv-8229, 2014 WL 5034674, at \*18 (S.D.N.Y. Oct. 3, 2014) (term “improve a precision ratio” indefinite, in part, because patent provided no guidance about how to measure improvement in precision ratio).

Third, ParkerVision cites to column 32, lines 9–18 in support of its position (“substantial[]” impedance matching “also improves the energy transfer”), but MediaTek’s opening brief explained this disclosure provides only a non-limiting example of “improving energy transfer” and that the patent does not describe how to measure an improvement in energy transfer other than from such “impedance matching.”

**C. “wherein said downconverting operation is performed so as to improve energy transfer from said input signal to a down-converted image”**

ParkerVision’s argument fails for the reasons set forth in Section IV.B above.

**D. “tend[s] away from zero time in duration”**

ParkerVision does not dispute that, to one of skill in the art, the phrases “tend toward zero time in duration” and “tend away from zero time in duration” have no ordinary meaning. *See* Dkt. 47 at ¶ 48 (Hashemi Decl.). Instead, ParkerVision contends that “tend away from zero time in duration” “simply means that the widths of pulses controlling a switch are being made wider.” Dkt. 50 at 22. But ParkerVision never describes any objective boundaries for how much wider the widths of the pulses must be made, other than (unhelpfully) that they must be wider than negligible apertures that tend toward zero time in duration. And ParkerVision does not provide an objective boundary between “tend toward zero time in duration” and “tend away from zero time in duration.” Additionally, ParkerVision suggests that this disputed term requires a change in pulse width over time (“are being made wider”), but as MediaTek explained in its opening brief, the ’706 and ’518 patents never disclose or discuss control signals whose aperture-width changes during the process of down-conversion. Dkt. 45 at 21. Finally, ParkerVision suggests that all that is required is “wider” aperture widths, but ParkerVision provides no guidance about the upper boundary, and there are at least two limits, impedance matching and mixing. That is, if the aperture width is made too wide then impedance matching may not result and so energy transfer would theoretically not be improved, *see* Dkt. 47 at ¶ 46, and at some (unknown and undefined point) ParkerVision would concede the system becomes a “mixing” system not covered by ParkerVision’s purported inventions. The patents provide no guidance about that upper boundary, however.

**E. “to extend the time that said switch is closed for a purpose of increasing energy transferred from said input signal”**

ParkerVision’s argument here fails for the reasons set forth in Section IV.D above.

**F. “a relatively low input impedance path” / “a relatively low impedance load”**

ParkerVision spends almost three pages on this issue (Dkt. 50 at 25–28), but it never rebuts the fact that the ’518 patent describes “low impedance load” and “relatively low impedance load” the same way without providing any guidance about objective boundaries between these two terms. Compounding this problem, ParkerVision acknowledges that patent uses other terms of degree to define “relatively low impedance load.” Dkt. 50 at 26 (“[T]he ‘relatively low impedance load’ *must be low enough* to allow a path for discharge of ‘non-negligible amounts of energy’ from a storage capacitor.” (emphasis added)). As MediaTek explained, however, this just moves the uncertainty, it does not resolve it. Dkt. 45 at 24. And ParkerVision makes no attempt to distinguish the on-point Federal Circuit decisions MediaTek cited, opting instead for generalized citations to the *Nautilus* standard.

Additionally, ParkerVision does not dispute that the distinct term “relatively low input impedance path” has no ordinary meaning to one of skill in the art. *See* Dkt. 47 at ¶ 54 (Hashemi Decl.). Instead, ParkerVision cites to a portion of the specification that uses “the input impedance of the system is reduced” to contend that patent provides an objective meaning for “relatively low input impedance path.” Dkt. 50 at 28. ParkerVision’s argument, however, is just *ipse dixit*, and it merely shifts the uncertainty to other indefinite terms of degree discussed in Sections IV.B, IV.C, IV.D, and IV.E above.

**G. “a relatively efficient power transfer path”**

ParkerVision concedes that the ’518 patent never uses “relatively efficient power transfer path” outside of the claims. ParkerVision, however, contends one of skill in the art would understand that the patent’s use of “impedance matching” means “relatively efficient power transfer path.” But this is unsupported attorney argument. Indeed, impedance matching results in *maximized* power transfer, *see* Dkt. 47 at ¶ 56, not merely “relatively efficient power

transfer”; and the patent never discloses or provides any objective boundaries as to what would or would not constitute “relatively efficient power transfer.” *Id.*; Dkt. 45 at 25.

**H. “wherein said frequency of said down-converted image is substantially equal to zero”**

ParkerVision’s only response to MediaTek’s indefiniteness contention on this term is case citations standing for the general proposition that “substantially” can be definite. Dkt. 50 at 30 (citing, *e.g.*, *Ecolab, Inc. v. Envirochem Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001) (“[T]he term ‘substantially’ is a descriptive term commonly used in patent claims to ‘avoid a strict numerical boundary to the specified parameter.’”)). The general proposition is irrelevant to this dispute, however. And ParkerVision makes no attempt to distinguish the on-point case law MediaTek cited, such as *GeoDynamics, Inc. v. Dynaenergetics US, Inc.*, No. 2:15-cv-1546-RSP, 2016 WL 6217181, at \*14–16 (E.D. Tex. Oct. 25, 2016) (“substantially equal to the total depth of penetration / (the tunnel)” indefinite). ParkerVision also cites to Dr. Ricketts’ untimely, “substitute” declaration for the proposition that “cellular/wireless systems, signals are not perfect.” Dkt. 50 at 29 (failing to challenge Dr. Hashemi’s opinions). But that is beside the point. As MediaTek explained, while the patent describes “zero IF” conversion in passing, it provides no guidance about what constitutes a down-converted image frequency that is and is not “substantially equal to zero.” Dkt. 45 at 25–26.

**I. “a substantially impedance matched [input] path”**

ParkerVision brief argument on this term merely incorporates by reference its argument for “wherein said frequency of said down-converted image is substantially equal to zero.” Dkt. 50 at 30. Its argument for this term fails for the reasons set forth in Section IV.H above.

Dated: December 5, 2023

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**CERTIFICATE OF SERVICE**

It is hereby certified that on this 5<sup>th</sup> day of December, 2023, a true and correct copy of the foregoing document, MediaTek's Reply Claim Construction Brief, was served upon all counsel of record, via the Court's CM/ECF system.

*/s/ Matthew C. Bernstein*

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